<b>Work Ord</b> December-20-12			1	*947	19*		1.74 75000011.79	4 1 Alex A 100			Page 1	_
Item ID: Revision ID:	D3953-9		2 <i>90</i> .	Accept	*N9000	140	100	)* s	etup Star	ıv.	S1*	
Item Name:	Gas Spring W	asher	*20*						Stop	' *N:	S2*	
Start Date:	12/19/12	Start Qty. 20.90	*20*		Cust Item ID:	;						
Required Date: Reference:	: 1/11/13	Req'd Qty: 20.00	*20*		Customer:							
Approvals:	Process Pla	an:	Date:13-01-2	Tooling:	Date	»:		R	tun Star		R1*	
	QC:	· (	Date:	SPC (Y/N):	Date	e:			Stop	*N	R2*	
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	
Draw Nbr	Rev	vision Nbr										_
D3953	С	:										
100				0.00					1200 00 0000000000000000000000000000000			
*100* Hardinge		Memo		0.00	<i>S</i> \$13	-01-14		51	B			
Hardinge CNC Lath	he Small	TURN AS F FOLIO REV DWG REV:	PER FOLIO FA855 & DWG									
		DEBURR										
110		QC2- Inspect parts off m	nachine FAI/FAIB	0.00					,			
*110* QC		Memo		0.00	Af 13-0	01-16		51	Ø	<u></u>		
Quality Control												

NCR:	/es	/ No				W	ORK ORDER NON-C		NFORM	ANCE / L	<b>JPDA</b>	TE	•		
													QA Closed:	Date:	
Nork Orde	er: ˌ						DISPOSITION			<u> </u>		AGAINST DE	PARTMENT/	PROCESS	
Part No Scrap Use-as-is					Rework Scrap Use-as-is		ſ	Skid-tube  Machining  noforming	_	Crosstube Small Fab Finishing		Water Jet d. Eng. Coor. e/Packaging	Engineering Quality Other		
NCR I	No.						Work Order Update			Large Fab	c	omposite		Supplier	
Root					Desc	ription	of work order update		nitial		Action		Sign &		
Cause		Date	Step	Qty		or No	n-conformance	Ch	ief Eng	De	escripti	ion	Date	Verification	QC Inspector
loc/Data quip/Tooling										f) 					
perator										i.					
1aterial								•							
etup										·					
ther										:					
rocess															
upplier										1					
raining										6 1					
napproved								1							
							F.	AUL	T CATE	GCIRY					
Landi	ng (	Gear				· ··-·	General								
!		Bending			Γ	Bend			Grain				Ovalized		Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM	1/Route		Hardwa	re			Over/Under	tolerance	Temperature/Cure
		Cracks				Brok	en/Damaged		Inspecti	on incomplete	e		Part Incorred	et 🗀	Weld
		Crushed/0	Crimped.			Burrs			1	ioris Incomple		lear	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs	•			Conta	amination		Mainte		•		Part Moved	- <u>L</u>	_ `
		Heat Trea	t				ntersink		Mislabe				Positioned V	Vrong	
	Inspection Strip in Tube Cut Too Short				─ <b>┤</b>			Other							
	$\overline{}$	Ripples in			F	Drill	Holes	Offset							
į				xtrusio	n	Drav	ving		Out of 0	Calibration			<del></del>		
	Torque Waves in Extrusion Drawing Turning Sequence Finish				Out of Sequence										

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

Folio

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	ork Order ID 94719 sember-20-12 8:08:18 AM			*94719*							
tem ID: Revision ID: tem Name:	D3953-9 Gas Spring V			Accept	*N900	<b>040</b>	100	)* s	etup Start Stop	I VI	S1* S2*
Start Date: Required Date Reference:	12/19/12 : 1/11/13	Start Qty: 20.00 Req'd Qty: 20.00	*20' *20'		Cust Item 15 Customer:	D:			Q <sub>1</sub>		
Approvals:		lan:	<b>.</b>	CDC (V/N)		ate:		R	un Start Stop	171	R1* R2*
Sequence ID/ Work Center I 120 *170* QC Quality Control	ID	Operation Description QC8- Inspect parts - seco	ond check	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*130 *130* Packaging Packaging		ldentify as per dwg & Sto	ock Location ST6	7 C 0.00 0.00				514			13-01-1
140 *14\\n\* QC Quality Control		QC21- Final Inspection -  Memo	- Work Order Release	0.00					/2	3/01/ 201	22 8

ς.

NCR:	Yes	/ No				WORK ORDER NON-	COI	<b>NFORM</b>	AANCE / UF	PDATE			
		_									QA Closed:	Date:	
Work Orde	er: ˌ					DISPOSITION	,			<del></del>	EPARTMENT,		
Part N	•					Rework Scrap Use-as-is Work Order Update	p Machining Small Fab is Thermoforming Finishing		Finishing	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier		Engineering Quality Other	
Root					Descri	ption of work order update		nitial	Ad	ction	Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved						F	AUL	T CATE	SC/RY				
Landi	ng G	ear				General							
	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend			Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Grain Hardware Inspection Incomplete Instructions Incomplete/Unclear Maintenance Mislabeled Misread Offset			Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V Power Loss/	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
]	Torque Waves in Extrusion Drawing			Jurawing	Out of Calibration								

Out of Calibration Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish Folio

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## **Picklist Print**

December-20-12 8:08:17 AM

Work Order ID:

94719

Parent Item:

D3953-9

Parent Item Name:

Gas Spring Washer

Start Date: 12/19/12

Required Date: 1/11/13

Page 1

**Start Qty: 20.00** 

Required Qty: 20.00

Comments:

IPP RevA: New issue 09.10.13 DD verified by:EC 10.03.02 verified by:EC IPP Rev:B as per dwg revC DD

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
Item Name	Item ID	Purch	Item	Location	Location	Seq ID	Measure	Hand		Qty	Issued	Issued	
MDELRINR0.750 Delrin Round Bar 0.75"		Purchased	No			100	f	216.5210	0.05	710,052632		Hi:	3-01-14
				<b>Location</b>		Loc Qty	<u>Lo</u>	c Code					
				MAT018		216.521							
				116	5183	4.8							
				117	273	4.665							
				117	322	0.94							
				121	783` `	68.648			<u>.7</u>	10'			
				122	2582	44.974							
				123	8698	92.494							

											D	QA:_	Dat	te:	*
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORI	MANCE / UPI	DATE	QA Clos	sed:	Dat	te:	1
Work Ord	or:					DISPOSITION				AGAINST DI	PARTM	ENT/	PROCESS		
Part i	Part No.  NCR No.					Rework Scrap Use-as-is Work Order Update	Scrap Machining Small Fab Use-as-is Thermoforming Finishing		Crosstube Small Fab Finishing Composite	<b>=</b> i	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier			Engineering Quality Other	
Root		,			Desci	ription of work order update		Initial	Act	ion	Sign 8	&			
Cause		Date	Step	Qty		or Non-conformance	Cł	nief Eng	Descr	ription	Date	e	Verification	n	QC Inspector
Doc/Data															
Equip/Tooling															
Operator												1			'
Material							1								i
Setup			ļ												
Other															
Process															
Supplier															
Training															
Unapproved															
						F	AU	LT CATE	GORY						
Landi	ing (	Gear				General		_	1	_	_				•
		Bending				Bend		Grain			Ovalized	d			Pressure/Forced
		Centre N	ot Concer	ntric to	o/s	BOM/Route		Hardware			Over/U	nder	tolerance		Temperature/Cure
	Cracks Broken/Damaged			Broken/Damaged		Inspection Incomplete			Part Incorrect			Weld			
	Crushed/Crimped. Burrs			Burrs					Part Lost/Missing			Wrong Stock Pulled			

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Part Moved

Positioned Wrong

Power Loss/Surge

Other

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Cuffs

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

DART AEROSPACE LTD	Work Order:	947/9
Description: Gas Spring Washer	Part Number:	D3953-9
Inspection Dwg: D3953 Rev: C		Page 1 of 1

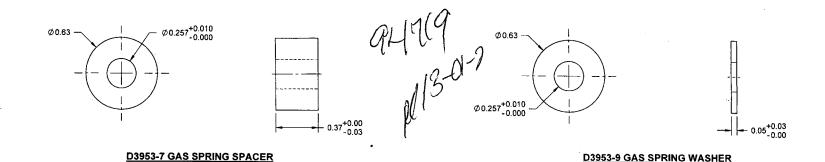
## FIRST ARTICLE INSPECTION CHECKLIST

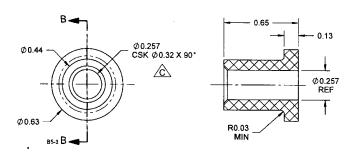
X	First Article	Prototype
لثا	1 11 31 711 11 11 11	

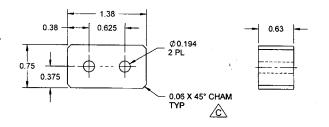
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.63	+/-0.030	0628		<del></del>	5008	Vern
Ø0.257	+0.010/-0.001	.428 .258	V			
0.05	+0.030/-0.000	.068			W	
			-		-	

	00		14 @		
Measured by:	St	Audited by:		Prototype Approval:	N/A
Date:	13-01-16	Date:	13-1-16	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	09.10.22	New Issue	KJ ,	11
В	09.12.14	Dimension updated per Dwg Rev	KJ 😽	
L			77	_/ /







**D3953-11 GAS SPRING SPACER** 

SECTION B-B 87-3

**D3953-13 GAS SPRING SPACER** 

D

С

DESIGN	AJS	DART AEROSPACE LTD	EITD		
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA			
CHECKED	W	DRAWING NO.	REV. C		
MFG. APPR.	3	D3953 SHEE	T 3 OF 4		
APPROVED	-	TITLE	SCALE		
DE APPR.	#	GAS SPRING LID COMPONENTS	NTS		
DATE 10.0	1.29	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIMATE AND CONTROL AND IS SUPPLED ON THE EXPRESS CONDITION NOT TO BE USED ON ANY PRIMODE OR COMPLIED COMMUNICATION TO ANY OTHICK PERISON WRITTEN PERMISSION FROM DAYS ARROPMORE IT.	N THAN IT IS INCHITIVE		

NOTES: 1) MATERIAL -7,-9 & -11: DELRIN II 150E OR ACETRON GP ACETAL, BLACK REF DART SPEC M-DELRIN-R

-13: AISI 304 STAINLESS STEEL BAR REF DART SPEC M304B

8

2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION -13 ONLY: IDENTIFY WITH DART P/N "D3953-13" USING FINE POINT PERMANENT INK MARKER 7) WEIGHT -7/-9/-11: < 0.01 lbs EACH

-13: 0.17 lbs